Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 22 of the Commission's Rules To Benefit the Consumers of Air-Ground Telecommunications Services	)	WT Docket No. 03-103
	)	
Biennial Regulatory Review—Amendment of Parts 1, 22, and 90 of the Commission's Rules	)	

REPLY COMMENTS OF THE BOEING COMPANY

The Boeing Company ("Boeing"), by its attorneys, hereby files these reply comments in the above-captioned proceeding.[1] Because the issues raised in this proceeding affect many of the activities in which Boeing is engaged, Boeing has a direct and significant interest in this proceeding.

As the world's leading aerospace company, Boeing is focused on the development of new products and services to meet the needs of its aviation customers and the flying public, including the creation of new versions of its family of commercial airplanes. Boeing is a leader in the production, support and modification of aircraft and other systems for civilian and government applications; and it is a manufacturer of satellite systems, including those supporting networks in the mobile satellite service that may provide aeronautical mobile communications. In addition, Boeing is in the process of implementing a global Aeronautical Mobile-Satellite Service system to provide advanced broadband connectivity for commercial, government and private aircraft

[1] In the Matter of Amendment of Part 22 of the Commission's Rules To Benefit the Consumers of Air-Ground Telecommunications Services, Biennial Regulatory Review—Amendment of Parts 1, 22, and 90 of the Commission's Rules, *Notice of Proposed Rulemaking*, File No. WT Docket No. 03-103, FCC 03-95 (rel. April 28, 2003) ("*NPRM*").

customers through its Connexion by Boeing[sm] service. In all of these areas, Boeing is committed to maintaining the highest level quality, reliability and safety of its products and services The ability to connect aircraft to terrestrial telecommunications networks is an important component of these products and services.

Boeing fully supports the Commission's efforts to streamline its Part 22 rules, and to develop a new, comprehensive regulatory framework for ATG services that will enhance competition and facilitate the provision of advanced communications services to aircraft passengers and crew. While the streamlining measures proposed by the Commission are ripe for decision, there are other fundamental issues raised in the *NPRM* and in the comments submitted in response thereto regarding ATG services that require further study before well-informed and reasoned decisionmaking can take place. Accordingly, Boeing urges the Commission to issue a further notice of proposed rulemaking focused on some of the complex technical and policy issues noted below which raise important considerations and require additional study.

I. INTRODUCTION

Boeing has been licensed by the Commission to operate up to 800 Ku-band transmit-receive earth stations on-board aircraft to provide broadband services in the United States.[2] In developing the Connexion by Boeing[sm] service, Boeing has devoted substantial resources to

[2] *See* Radio Station Authorization, Call Sign E000723, File No. SES-MOD-20020308-00429; *see also The Boeing Company,* Order and Authorization, 16 FCC Rcd. 22645 (Int'l Bur./OET 2001) (blanket license to operate 800 phased array antenna earth stations on-board aircraft within the United States). A modification application to substitute 675 phased array antennas with a like number of reflector antennas with improved operational characteristics remains pending before the Commission. *See* Boeing Application to Modify Blanket Authorization to Operate up to Eight Hundred Technically Identical Transmit and Receive Mobile Earth Stations Aboard Aircraft in the 11.7-12.2 and 14.0-14.5 GHz Frequency Bands, File No. SES-MOD-20030512-00639 (filed May 12, 2003). The Commission also recently placed on public notice a petition for rulemaking filed by Boeing proposing comprehensive service rules to govern Ku-band AMSS operations. *See* Public Notice, Report No. 2632, RM No. 10800 (rel. Oct. 2 , 2003).

establishing the technical basis, operational infrastructure and regulatory framework, as well as the business case, for broadband communications to aircraft. Indeed, Boeing believes that there is strong current and future demand for AMSS and ATG services generally, and for broadband services in particular. There are 13,000 jetliners in the global commercial aircraft fleet today; in 2012, there will be 21,000. According to market research conducted by Boeing and others, 50 percent of airline travelers have a strong interest in in-flight email and Internet access, and 60 percent said they would be willing to pay for it. In addition, 75 percent of business travelers carry laptops in-flight, and 62 percent of U.S. frequent business travelers are either "extremely" or "very" interested in Connexion by Boeing[sm] broadband services. Thus, there plainly is a substantial and growing market for broadband services on aircraft.

Satellite systems offer great potential for communications to aircraft. Operators such as Inmarsat have offered communications services in L-band Mobile-Satellite Service ("MSS") frequencies for some time. While those services have been limited by low data rates, cost and spectrum availability, further improvements may be foreseen. Moreover, the Connexion by Boeing[sm] service uses standard Fixed-Satellite Service ("FSS") satellite transponders in the 14.0-14.5 GHz (uplink) and 11.7-12.2 GHz (downlink) bands to deliver cost-effective broadband connectivity to aircraft passengers and crew.

In addition to aeronautical communications services via satellite, terrestrial-based systems have been providing ATG services for the past decade. In the *NPRM*, the Commission outlined the background of the commercial air-ground radiotelephone service operating at 849-851 MHz and 894-896 MHz ("800 MHz band"), as well as alternative approaches to providing ATG services using traditional cellular networks and frequencies.[3] Despite substantial interest in

[3] *See NPRM*, ¶¶ 8-9, 15.

ATG services, however, only a single operator (Verizon Airfone) is using the 800 MHz band to serve commercial aviation customers, in part because of the limited amount of spectrum available and the substantial restrictions on use of the band as a result of the existing regulatory regime.[4] Similarly, the use of terrestrial cellular frequencies to provide ATG services is limited to one main proponent (AirCell, Inc.) operating pursuant to a Commission waiver, but use of those frequencies is constrained by complex interference questions that have not yet been resolved.[5]

The Commission has a unique opportunity in the context of this proceeding to develop a comprehensive regulatory framework that will enhance competition and facilitate the provision of ATG services to the public. In developing a new regulatory regime for ATG services, the Commission should continue to promote multiple entry in the available ATG spectrum and to protect aircraft systems and other communications services from harmful interference, while maximizing the flexibility afforded to aeronautical communications providers and the services available to aircraft passengers and crew. In addition to passenger voice communications, ATG spectrum can be used to support a wide array of other important communications applications--including aircraft management and public safety services, homeland security and related communications, data applications, etc. -- and the Commission should remain mindful of these various applications and services as it restructures its ATG rules. However, these issues involve complex technical questions and important policy considerations that require additional study and comment to develop a sufficient record from which to create a new ATG regulatory regime.

[4] *Id.*, ¶ 12.

[5] *Id.*, ¶ 15.

II. THE COMMISSION MAY RESOLVE PART 22 STREAMLINING AND PAGING ISSUES, BUT SHOULD ISSUE A FURTHER NOTICE OF PROPOSED RULEMAKING FOCUSED ON ATG SERVICES

In the *NPRM*, the Commission proposed a number of changes to various parts of its rules. For example, the Commission proposed to revise or eliminate certain Part 22 Public Mobile Services ("PMS") rules that have become obsolete as the result of technological change, increased competition, and changes to related Commission rules.[6] The Commission also proposed to recodify certain Part 22 PMS rules to Part 1 of its rules, amend its Part 1 rules and make several conforming amendments to its Part 90 rules.[7] In addition, the Commission sought comment on providing licensees of nationwide paging channels flexibility to provide other services and on whether its rules limiting the provision of dispatch service by paging licensees are too restrictive.[8] In addressing these issues, the Commission seeks to further one of its key strategic goals -- to "[e]ncourage the highest and best use of spectrum domestically and internationally in order to encourage the growth and rapid deployment of innovative and efficient communications technologies and services."[9]

Most importantly, however, the Commission sought to embark on a fundamental reexamination of its rules regarding ATG services.[10] Given the existing limitations on commercial ATG operations, the current state of the ATG marketplace and the amount of spectrum available in the 800 MHz band, the Commission requested "all possible suggestions for

---

[6] *Id.*, ¶¶ 23-50.

[7] *See generally id.*

[8] *Id.*, ¶¶ 51-70.

[9] *See id.*, ¶ 1 (citing FCC Strategic Plan FY 2003-FY 2008 at 5 (2002)).

[10] *See id.*, ¶ 3.

fundamental reform of our spectrum policy" with respect to ATG services.[11] Thus, the Commission sought comment on potential changes to its commercial air-ground radiotelephone service rules to facilitate greater use of the 800 MHz band, on flexible use of that spectrum for terrestrial as well as ATG services, on the use of cell phones and other personal electronic devices ("PEDs") on aircraft, and on the potential allocation of additional spectrum for ATG services.[12]

The Commission should be able to decide the Part 22 streamlining and paging service proposals in the *NPRM* based on the initial comment cycle in this proceeding. With respect to ATG issues, however, the questions posed in the *NPRM* are so broad that the initial comments filed in the proceeding were necessarily varied and incomplete. Indeed, the Commission has not yet developed specific ATG regulatory proposals as required by the Administrative Procedure Act and interpretative case law. Indeed, more akin to a notice of inquiry, the *NPRM*'s discussion of ATG issues appears designed to elicit a broad range of input to develop a further notice of proposed rulemaking, and the *NPRM* does not include proposed rules to address the numerous, fundamental issues raised therein. Thus, rather than providing "sufficient detail and rationale for the [ATG rules] to permit interested parties to comment meaningfully," the *NPRM* sought comment on a wide array of ATG-related issues to be developed further in the context of this proceeding.[13] As a result, it simply is premature for the Commission to reform fundamentally its ATG rules and policies based on the record of the proceeding to date. Accordingly, Boeing urges the Commission to develop a further notice of proposed rulemaking dedicated solely to

---

[11] *See id.*, ¶ 17.

[12] *See id.*, ¶¶ 18-22.

[13] *See Florida Power & Light Co. v. United States*, 846 F.2d 765, 771 (DC Cir. 1988), *cert. denied*, 490 U.S. 1045 (1989); *see also* 5 U.S.C. § 553(b)(3).

ATG issues, as informed by the initial round of comments in this proceeding.

III. THE COMMISSION SHOULD DEVELOP ATG SERVICE RULES AND POLICIES THAT ENHANCE COMPETITION AND FACILITATE FLEXIBLE USE OF ATG SPECTRUM

As an aerospace industry leader, Boeing is constantly seeking to improve the safety, reliability and efficiency of its aircraft, aviation systems and services. The ability to link aircraft with terrestrial communications networks for voice communications and broadband connectivity is an important component of this effort, and the policies the Commission adopts in this proceeding should allow for continued innovation in this area. Furthermore, as an aircraft earth station licensee authorized by the Commission to provide aeronautical communication services via satellite, Boeing seeks to ensure that the Commission's future ATG rules and policies allow the flexibility use of multiple technologies to provide ATG services and provide a level playing field for all providers of communications services on aircraft.

As an initial matter, although implicit in the *NPRM*'s discussion of service in other spectrum, the Commission should remain mindful that aeronautical communication services are composed of a broader class of services than ATG operations in the 800 MHz or terrestrial cellular bands. Rather, aeronautical communication services include both traditional voice and limited data service (presently offered in the 800 MHz and cellular bands) and advanced broadband communications applications, such as those provided by Connexion by Boeing[sm]. Moreover, aeronautical communication services can be provided using various types of technologies and system architectures, including terrestrial and satellite-based systems. Therefore, in developing new rules and policies for ATG services, the Commission should consider the potential operational and competitive implications of proposals on all types of aeronautical communication systems and services.

Any changes to the Commission's ATG rules and policies should be guided by a number of fundamental considerations, including: (i) preserving opportunities for multiple entrants; (ii) facilitating the provision of ATG services via multiple system architectures and technologies, and permitting flexible use of spectrum for ATG services; (iii) protecting the operations of other co-frequency communications services; (iv) permitting use of cell phones and other PEDs aboard aircraft, while protecting avionics and other aircraft systems from interference; and (v) permitting operations aboard U.S.-registered aircraft outside the United States. Each of these issues is addressed below.

A. ATG Service Rules and Policies Should Preserve Opportunities for Multiple Entry, Be Technology Neutral and Permit Flexible Use of Spectrum for ATG Services

The Commission's ATG rules and policies must be designed to enhance competition and facilitate entry of multiple aeronautical communication competitors. Any allocation in the 800 MHz band should allow for multiple applicants and should not be made available *a priori* to a single company; indeed, it would be patently anti-competitive to grant exclusive spectrum rights to a single ATG service provider.[14] Thus, the Commission must reject the suggestion of Verizon Airfone that it should be afforded access to all or substantially all of the currently available 800 MHz band spectrum for its ATG system.[15] Similarly, the Commission's actions in this proceeding should not be driven merely by a desire to expand the Verizon Airfone's access to

[14] The Commission raises the issue of whether the number of potential ATG providers is related to the existence of typical exclusive relationships with airlines to place equipment on aircraft. *See NPRM*, ¶ 18. Although there should be room for multiple ATG technologies aboard aircraft (*i.e.*, both terrestrial and satellite-based systems), granting exclusive use of ATG spectrum to a single provider with established relationships with airlines and a large installed base of equipment would stifle competition in ATG services.

[15] *See generally* Verizon Airfone's Comments on Notice of Proposed Rulemaking, WT-Docket No. 03-103 (Sept. 23, 2003); *see id.* at 9-10.

800 MHz frequencies or to accommodate AirCell's non-conforming operations in ATG spectrum. Rather, the Commission should take this opportunity to further the public interest by adopting pro-competitive and flexible-use policies for ATG spectrum and services.

To the extent additional spectrum is identified for ATG services, the spectrum assignment and services rules governing such spectrum should facilitate multiple entry of ATG systems. Therefore, if the Commission is able to identify 60 MHz of dedicated ATG spectrum as requested by Qualcomm[16] or some other amount of spectrum (either on a shared or unshared basis), allowance should be made for multiple ATG providers to have access to such spectrum.[17] To the extent possible, Boeing believes that any additional spectrum identified for ATG services should be in bands below about 2.7 GHz in order to take advantage of current and future cellular technologies.

B. ATG Service Rules and Policies Should Be Technology Neutral and Permit Flexible Use of Spectrum for ATG Services

The Commission's new ATG rules and policies also should facilitate the provision of aeronautical communication services via multiple system architectures and technologies (*i.e.*, terrestrial, satellite and hybrid terrestrial-satellite). Thus, to ensure a healthy marketplace and maximize the benefits of competition to consumers, the Commission should ensure that any rules it adopts provide for a level playing field regardless of the technology used. Indeed, the Commission should afford ATG operators the flexibility to deploy technologies best suited to

[16] *See id.*

[17] For its part, the Connexion by Boeing[sm] system is presently designed to operate with multiple competing ATG providers, as well as incumbent FSS services. The recent application by Aeronautical Radio Inc. ("ARINC") to operate a separate network of aircraft earth stations to provide broadband services to aircraft in Ku-band frequencies confirms this. *See* Public Notice, Report No. SES-00541 (rel. Oct. 15, 2003). Similarly, the Commission's competition policies require that the 800 MHz band and any additional spectrum earmarked for ATG services be made available to multiple entrants.

meet their customers' needs to promote the innovative use of available spectrum.

The Commission's regulatory regime also should permit the flexible use of spectrum for aeronautical communication services.[18] As the Commission is aware, affording licensees greater flexibility in the use of their spectrum leads to greater technical, economic and marketplace efficiency.[19] Thus, the Commission should ensure that its rules allow a full panoply of services to be provided to consumers, including voice, data, video and other broadband applications. For example, the Connexion by Boeing[sm] service will provide a wide range of communications services such as: (i) in-flight video teleconferencing; (ii) remote medical evaluations; (iii) enhanced security services, including audio/video cabin monitoring; (iv) voice services, (v) streaming data; (vi) news and entertainment; (vii) wireless cabin networks; (viii) crew information services; (ix) in-flight reservations and check-in; and (x) fleet management, operations and maintenance data services. Thus, the Commission's rules and policies governing ATG services, as well as associated wireless networking within the aircraft, should permit the broadest possible range of services to be offered to consumers.

C. ATG Service Rules and Policies Must Protect Co-Frequency Operations of Other Authorized Communications Services

A number of commenters suggest that ATG operations in traditional cellular spectrum, as well as the operation of cellular handsets on aircraft, can cause unacceptable interference to terrestrial wireless systems.[20] This issue should be examined in greater detail in this proceeding,

---

[18] *See generally* Spectrum Policy Task Force Report, ET Docket 02-135 (Nov. 2002).

[19] *See NPRM*, ¶ 2.

[20] *See* Comments of Verizon Wireless, WT Docket No. 03-103 (Sept. 23, 2003) at 2-9; Comments of Cingular Wireless, WT Docket No. 03-103 (Sept. 23, 2003) at 7-15.

taking into account the various tests being performed by interested parties.[21] Indeed, Boeing itself is testing new technologies to address this very issue and requires additional time to conclude these tests and present their results. Boeing believes that such interference questions must be resolved on an expedited basis, however, and urges the Commission establish an aggressive timetable for submission of technical studies and comments regarding these issues.

Boeing notes that technology may already exist which should address the concerns of wireless carriers regarding potential interference into terrestrial networks. For example, low power operation of cell phones using on-board picocells, combined with aircraft shielding, may ensure that no harmful interference is received by terrestrial wireless carriers from such devices on aircraft. For another example, dual or multi-band handsets that utilize non-terrestrial cellular spectrum while airborne may also ensure that no harmful interference is received by terrestrial wireless carriers from such devices on aircraft. In addition, wireless handsets and other PEDs are rapidly evolving and will soon be capable of using Bluetooth, 802.11 and other transmission technologies to potentially communicate with an onboard ATG or satellite system. Thus, even if the Commission ultimately concludes that communications on standard wireless frequency bands should be prohibited across the board (*i.e.*, for cellular and other wireless handsets), it should not ban such communications via other means.

D. ATG Service Rules and Policies Should Permit the Use of Cell Phones and PEDs on Aircraft, While Protecting Aircraft and Ground Systems from Interference

Section 22.925 of the Commission's rules and Federal Aviation Administration ("FAA") rules as supplemented by an advisory circular generally prohibit airborne use of cellular

[21] *See, e.g.*, Comments of Cingular Wireless LLC, WT Docket No. 03-103 (Sept. 23, 2003) at 16-17; Comments of AirCell, Inc., WT Docket No. 03-103 (Sept. 23, 2003) at 8-9, 11-12.

telephones.[22] The FAA has joint jurisdiction with the Commission regarding the use of telecommunications devices on airplanes.[23] The FAA has requested that RTCA, Inc., an organization serving as a Federal Advisory Committee to the FAA regarding communications, navigation, surveillance and air traffic management issues, form an advisory committee of government, industry and academic experts to specifically address the risks associated with use of portable wireless devices on aircraft. The RTCA advisory committee is expected to complete this task in late 2005.[24]

Commercial airlines have expressed significant interest in changes that would facilitate the provision of additional communications services to their passengers, particularly in the area of cell phone use. In the *NPRM*, the Commission noted that Delta Air Lines has stated to the Commission that it believes that its "passengers also want to use their cell phones during flight if they would be permitted to do so. . . . If this technology can be applied to commercial passenger aircraft so that passengers can use their own cell phones, this would be a major benefit to our airline and passengers, including our many frequent travelers whose convenience and productivity would be increased by the availability of these communications."[25] The Commission further cited a *Wall Street Journal* article indicating that a number of airlines are

[22] 47 C.F.R. § 22.925; 14 C.F.R. § 91.21; Federal Aviation Administration Advisory Circular No. 91.21-1A, "Use of Portable Electronic Devices Aboard Aircraft" (Oct. 2, 2000).

[23] Amendment of Sections of Part 22 of the Commission's Rules in the Matter of Airborne Use of Cellular Telephones and the Use of Cell Enhancers in the Domestic Public Cellular Radio Service, *Report and Order*, 7 FCC Rcd 23, 24 (1991).

[24] FAA regulations and guidance related to the use of portable electronic devices on board aircraft are not expected to change significantly until this advisory committee completes its studies and provides recommendations to the FAA.

[25] *See NPRM* at ¶ 16 (citing Letter to Michael K. Powell, Chairman, Federal Communications Commission, from Timothy W. Mapes, Managing Director, Customer Products and Services, Delta Air Lines, Inc. (dated Oct. 2, 2002)).

exploring a variety of technologies for enhancing communications services offered to passengers during flight, such as Verizon Airfone's updated ATG service and, of course, the Connexion by Boeing[sm] service.[26]

Of course, air safety is of paramount importance to Boeing. Thus, Boeing has been studying the affects of operating cell phones and other PEDs aboard aircraft for many years, and is working closely with RTCA to respond to the FAA's inquiry regarding this issue. While these studies remain ongoing and will take some time to complete, Boeing is confident that they will demonstrate that cell phones and other PEDs can be operated safely aboard aircraft in flight. This, in turn, will facilitate the use of such devices in connection with ATG systems to provide a broad range of new communications service options to the flying public. Given the strong interest in allowing cell phone use aboard aircraft, the FAA's involvement, and the ongoing testing being performed, the Commission should develop a more comprehensive record on this important issue to determine whether elimination of its current ban on cell phone use is warranted if acceptable measures are taken to protect aircraft and ground systems from interference.

E. ATG Service Rules and Policies Should Permit Operations Aboard U.S.-Registered Aircraft Outside the United States

In its comments, the Societe Internationale de Telecommunications Aeronautiques ("SITA") suggests that the regulatory model adopted by the Commission for ATG services should permit the use of individual mobile handsets onboard U.S.-registered aircraft regardless of whether the aircraft is located inside or outside U.S. airspace.[27] Boeing agrees with these

[26] *See id.* (citing Ron Liefer and J. Lynn Lumsford, "Totally Wired at 32,000 Feet," *Wall Street Journal* (Oct. 24, 2002) at D1; Susan Stellin, "A Networked World's Final Frontier: the Airplane," *New York Times* (Nov. 12, 2002) at C9).

[27] *See* Comments of SITA, Docket No. 03-103 (Sept. 23, 2003) at 5.

comments. Authorizing use of mobile handsets aboard U.S. aircraft flying outside the United States (where technically feasible from an interference perspective), is fully consistent with the Commission's jurisdiction under the Communications Act of 1934, as amended, and with general principles of international law.

Section 301(e) of the Communications Act (with a limited exception that is not relevant here) grants the Commission jurisdiction to license the operation of radio stations "upon any vessel or aircraft of the United States."[28] The Commission's jurisdiction over aircraft of the United States under Section 301(e) is not limited by the geographic location of the aircraft. Moreover, when Congress enacted Section 301(e) of the Act, it specifically eliminated the geographic restriction on aircraft radio licensing jurisdiction previously established by Section 1 of the Radio Act of 1927, the provision on which Section 301 is based.[29] This evidences Congress's clear intent to grant the Commission the authority to license radio stations on U.S. aircraft regardless of their geographic location. Thus, the Commission plainly has statutory authority to regulate mobile handsets aboard U.S. aircraft whether operating within or outside the territorial boundaries of the United States.

In addition to the plain language and legislative history of Section 301(e), this conclusion is consistent with longstanding FCC precedent involving Commission exercise of substantive

[28] *See* 47 U.S.C. § 301(e). The limited exception, set forth in Section 303(t) of the Act, does not constrain the substantive jurisdiction of the Commission over radio stations aboard U.S. aircraft, but rather authorizes the Commission to enter into agreements with foreign governments by which it shall recognize radio station and operator licenses issued to foreign aircraft operators that utilize U.S.-registered aircraft. *See* 47 U.S.C. § 303(t). The Commission also has the explicit authority to license "any other mobile stations within the jurisdiction of the United States." 47 U.S.C. § 301(f).

[29] *See* Radio Act of 1927, P.L. No. 632, 69th Cong. (Feb. 23, 1927) at § 1. Section 1 of the Radio Act granted licensing authority over radio stations "(e) upon any vessel of the United States, or (f) upon any *aircraft or mobile stations within the United States. . . .*" *See id.* (emphasis added).

jurisdiction over and licensing of satellite earth stations operating beyond the twelve-mile territorial limit of the United States.[30] Similarly, in the non-satellite context, the FCC routinely authorizes radio equipment on U.S. aircraft for both domestic and international use.[31]

The licensing of mobile handsets aboard U.S. aircraft while in international airspace is also consistent with general principles of international law. In this connection, the Convention on International Civil Aviation ("Chicago Convention"), to which the United States is a Signatory, explicitly recognizes that "appropriate authorities" of the nation in which an aircraft is registered retain licensing authority over radio stations aboard that aircraft even when located above the territory of a foreign nation, provided such aircraft's radio stations are operated in accordance with the regulations of that foreign nation.[32]

To the extent that U.S. aircraft enter the airspace of another nation, individual mobile handsets aboard U.S. aircraft would be subject to the right of that country to exercise jurisdiction over radio station operations above its territory. In this regard, the Chicago Convention generally provides that "[t]he contracting States recognize that every State has complete and

---

[30] *E.g., AMSC Subsidiary Corp.*, 10 FCC Rcd. 10924 (1995) (granting modification of blanket earth station license for 200,000 mobile earth terminals to operate throughout the United States and in U.S. coastal waters up to 200 miles offshore, the service area of the associated U.S.-licensed MSS satellite); *Aeronautical Radio, Inc., et al.*, *Petition for Waiver of 87.147 and 87.187 of the Commission's Rules*, 5 FCC Rcd. 3038 (1998) (granting a waiver of FCC rules to permit commercial airlines to operate aircraft earth stations internationally for communications using Inmarsat).

[31] *See* 47 C.F.R. Part 87 (2001). *See also Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico*, *Notice of Proposed* Rulemaking, FCC 02-101 (released May 3, 2002) (proposing licensing of MDS and ITFS spectrum in the Gulf of Mexico).

[32] *See* Convention on International Civil Aviation (signed Dec. 7, 1944) at Art. 30 (Aircraft radio equipment). While Annex 10 to the Chicago Convention primarily relates to safety and non-public correspondence communications, Art. 30 by its terms is not so limited.

exclusive sovereignty over the airspace above its territory."[33] The Chicago Convention further provides that:

> Aircraft of each contracting State may, in or over the territory of other contracting States, carry radio transmitting apparatus only if *a license to install and operate such apparatus has been issued by the appropriate authorities of the State in which the aircraft is registered*. The use of radio transmitting apparatus in the territory of the contracting State whose territory is flown over shall be in accordance with the regulations prescribed by that State.[34]

Thus, although the Commission would still maintain licensing jurisdiction, a U.S. ATG operator may still be required to comply with the rules and regulations of any foreign nation within whose airspace regarding individual mobile handsets aboard aircraft are operating, including any separate licensing requirements that may be imposed.

IV. CONCLUSION

The Commission has the opportunity in this proceeding to have a strong positive impact on the current ATG service, as well as on aeronautical communications generally and the aerospace industry as a whole. By developing a more complete record in this proceeding, as suggested by Boeing, the Commission can further its goal of ensuring high-quality, reliable and affordable telecommunications services are available to the air traveling public. For the

[33] *Id.* at Art 1.

[34] *Id.* at Art. 30. (emphasis added).

foregoing reasons, Boeing respectfully requests that the Commission issue a further notice of proposed rulemaking proposing ATG service rules and policies consistent with these reply comments.

Respectfully submitted,

THE BOEING COMPANY

By: /s/ Philip L. Malet

Philip L. Malet
Carlos M. Nalda
Steptoe & Johnson LLP
1330 Connecticut Avenue, NW
Washington, DC 20036
(202) 429-3000

Counsel for The Boeing Company

October 23, 2003